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Years of Short-Term Strategy Create a Crunch in Natural Gas

Consumers Face Soaring Bills
In Winter as Utilities Fail
To Hedge Against Risks

Asking the Public for Charity

By REBECCA SMITH
And RUSSELL GOLD

Behind the soaring natural-gas bill consumers face this winter are powerful economic and political forces that drove the industry to think short-term. That approach seemed to serve it well for years but isn't working now.

Utilities have shunned multiyear supply contracts, forcing them to buy much of the gas they sell at or near the current market price. Regulators have discouraged hedging against price rises. Gas producers have focused on wells they could drill quickly.

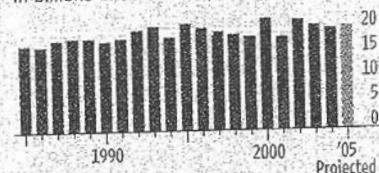
All those policies made sense in the 1990s, when prices were mostly falling and forecasters saw a long era of cheap natural gas ahead. The downside: When supplies tighten, consumers feel the hit quickly.

As temperatures drop, people who heat their homes with natural gas—about 57% of the 110 million U.S. households, according to the Census Bureau—are in for an unpleasant jolt. Natural-gas prices have risen above \$13 per million British thermal units from around \$7 a year ago. Most of that extra cost is getting reflected directly in gas bills. Owners of gas-heated homes should expect to spend an average of \$1,096 this winter, up 48% from last winter's already-high prices, according to the federal Energy Information Administration.

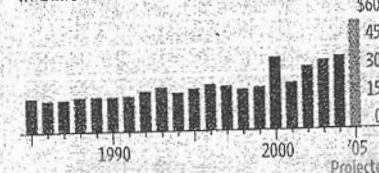
Inflated Costs

A look at household winter natural-gas consumption and spending.

Demand remains about the same...
In billions of cubic feet per day



...but the cost keeps rising.
In billions of dollars per season



Note: Winter defined as October through March; labeled by the year season begins.
Source: Energy Information Administration

For many families, high bills could result in greater credit-card debt, delinquent payments, utility shutoffs and diminished Christmas spending. The situation has rattled nerves in Washington, leading to calls for more offshore drilling and pleas for homeowners to turn down their thermostats. "This is going to be a really difficult winter," says Stephen Ewing, head of gas operations at DTE Energy, an electric and gas utility in Detroit.

Natural gas has swung to scarcity from abundance in recent years as energy companies run out of easy-to-tap wells. Unlike oil, it's hard to ship natural gas across the ocean, so more than 97% of U.S. supply comes from North America. During the past 12 months, natural-gas prices for consumers have risen 28.1%, according to the Bureau of Labor Statistics. The final consumer price of gas doesn't rise as quickly as the spot-market price in large part because the retail bill reflects costs such as transportation and pipeline maintenance that are relatively stable.

While there is thought to be ample natural gas underneath North America, getting it out is harder nowadays. Companies have to drill more wells and use more expensive technology such as cracking open tight rock formations by pumping in pressurized liquids. Meanwhile, demand for the clean-burning fuel has steadily risen as companies try to meet clean-air regulations.

Then came hurricanes Katrina and Rita. Katrina smashed plants in Louisiana and Mississippi that take gas from the Gulf of Mexico and move it onto pipeline networks in the U.S.

The market's susceptibility to supply shocks and sudden price swings is a legacy of deregulation that began with small steps in 1978 and took hold in the 1990s. The deregulation of wholesale markets included lifting federal price controls and allowing new players into the business of pumping and distributing natural gas. The measures succeeded—perhaps too well. As gas prices fell in the 1990s even amid healthy demand, regulators and companies began to disregard the possibility that prices would ever rise.

Now the pendulum has swung. Gas utilities are urging customers to winterize their homes, buy fuel-efficient furnaces and water heaters, and "levelize" their payments, spreading winter costs over more months. They're also pushing Congress to fund energy assistance programs more generously.

Aquila Inc., which has gas and electric utilities in seven states, is helping offer low-wage households tax advice. It hopes they'll apply for the earned-income tax credit and use the money to pay their utility bills.

When to disconnect customers who don't pay their bills is likely to be a touchy issue. Many utilities say they're willing to relax disconnection policies, but they're asking the public to chip in part of the cost through charitable contributions.

Regulators typically allow utilities to make up a certain amount of bad-debt losses by passing the cost along to other paying customers. In the case of Southern California Gas Co., a unit of Sempra Energy, that limit is \$10.5 million. After that, the company's shareholders bear the burden. This winter, however, a dilemma for SoCal Gas: Either take a

hit to the bottom line, or cut off the poor once bad debt passes \$10.5 million and feel a public backlash. Hoping to avoid that choice, SoCal Gas is soliciting donations to its Gas Assistance Fund, which helps poor people pay their bills.

The rise in prices and demand for natural gas has made some of the utilities' defensive strategies less effective. One is the longstanding practice of buying gas "out of season"—that is, in the summer when prices are lowest. They store the gas in underground caverns and pull it out in the winter, protecting consumers against higher winter spot-market prices.

In the past decade, however, companies have built many power plants fired by natural gas, and these plants often consume the most gas in the summer. Power-generation companies have found it easier to get permits for natural-gas plants. They're cheaper to build and cleaner to operate, helping companies comply with federal clean-air laws.

The result is less seasonal variation in prices because demand is steadier. This summer, the cost of gas averaged

more than \$8 per million British thermal units, higher than the average cost of gas for any winter on record. In July, power plants burned 24% more natural gas than a year earlier amid hot, humid weather. The biggest burner of natural gas in the nation is a power generator, Calpine Corp., San Jose, Calif. Most of its 92 power plants didn't even exist a decade ago.

Common Practice

Hedging against price fluctuations is a common practice in many industries—airlines, for instance, often try to lock in fuel prices using futures contracts—but it has been less common among gas utilities. Some states effectively discourage hedging. In Connecticut, if a utility buys a hedge and saves its customers money as a result, it gets to keep only 20% of the savings. But if the utility guesses wrong and buys a hedge that turns out to be unnecessary, its shareholders have to absorb 80% of the cost.

Even without such rules, utilities have seen little incentive to hedge because they can immediately pass on higher costs to consumers. Now, however, some utilities are worried prices have gone too high. While utilities promote conservation in their advertising, in reality they want customers to keep buying their product, so long as those customers are paying their bills. Sudden, sharp price increases may both discourage usage among paying customers and increase the number of nonpaying customers.

PG&E Corp., the big San Francisco gas and electric utility, stored or purchased about 60% of the gas its customers will need this winter as of September. That means it likely will pay high spot-market rates for the remaining 40%. PG&E got approval this month from the California Public Utilities Commission to do more hedging—at less shareholder

risk—for the next three years. Of course, now is a bad time to buy those hedges. They were a lot cheaper a few months ago, when people weren't so worried about gas prices.

The volatility of the market is far cry from the regulated days of the 1930s through 1970s. In that era, Congress set the price of gas as it was pulled out of the ground. The goal was to prevent pipeline operators from using their regional monopolies to exert excess power over pricing. Utilities typically signed long-term contracts for gas, sometimes lasting decades, insulating themselves from yearly price swings.

The upshot, however, was a shortage of natural gas that lasted through the 1960s and 1970s. In 1978, a time of growing worries about dependence on foreign energy, Congress started a slow march toward deregulation, phasing in the elimination of price ceilings. Companies ramped up production in the 1980s. Gas flowed easily, and prices fell. Regulators discouraged long-term contracts, fearing utilities would lock in high prices and consumers would pay more than necessary. "It pushed companies to the other end of the spectrum—maybe too far," says DTE's Mr. Ewing.

Gas producers played it safe. Many drilled new holes in existing fields rather than investing in unexplored areas. Com-

panies that weathered "years of cruddy natural-gas prices survived because they took no risks," says Aubrey K. McClendon, chief executive of Chesapeake Energy Corp. in Oklahoma City, the eighth-largest producer of natural gas in the U.S.

All this was rational in the context of widespread expectations that prices would remain soft. In December 1999, the National Petroleum Council, an industry group that advises the energy secretary, said there were "sufficient resources...to meet growing demand well into the 21st century." The council projected average prices through 2010 wouldn't rise much beyond \$3 per million BTUs. It was wrong. The last time natural gas traded below \$3 was August 2002. On Friday, November 22, natural-gas futures were priced at \$13.22.

Tight Market

Wells these days are finding less gas and running dry faster. In 1990, energy companies drilling in the lower 48 U.S. states and the Gulf of Mexico could expect a new well to produce 12% less in its second year. By 2004, wells were expected to lose 37% of production in their second year, according to IHS Energy.

The sum of these shifts is a natural-gas market that was remarkably tight even before hurricanes Katrina and Rita battered the Gulf Coast natural-gas industry. Katrina not only smashed gas-processing plants, it also damaged underwa-

ter pipelines and toppled 108 platforms. That has reduced production by about 320 billion cubic feet of natural gas, equivalent to more than five days of U.S. consumption. "If we get a cold winter, that could put prices out of sight," says Robert Esser, a senior consultant with Cambridge Energy Research Associates.

Until recently, gas producers were slow to respond to high prices, wary that the trend might not continue. Then, as they finally began to ramp up drilling, a shortage of drilling rigs developed. Chesapeake, the most active driller in the U.S., decided to buck industry practice in 2000 and build some of its own rigs rather than leasing them. It now owns 16 rigs and has a further 24 on order.

The Natural Gas Supply Association, a producers' group, blames tight supplies on federal policies restricting drilling on federal lands and lawsuits by environmental groups. In 2001, the Bush administration acceded to Florida Gov. Jeb Bush's request and canceled a drilling lease on 4.5 million acres in the eastern Gulf of Mexico, an area believed to contain large gas deposits.

Gas imports also have stumbled. Canada, the leading exporter of gas to the U.S., is using more of its gas to make steam to melt its oil-sands deposits to make crude oil. Moreover, Canada is shuttering some coal-fired power plants and replacing them with gas-fired plants to satisfy pollution-reduction targets of

the Kyoto Protocol.

Unlike oil, natural gas cannot be imported easily. To fill the hold of a tanker, natural gas must be chilled to minus 260 degrees Fahrenheit, which turns it into a liquid. The U.S. normally imports about 3% of its gas supply on tankers. But in the past few months, several large new plants in Egypt, Qatar and Australia that liquefy gas have experienced problems. This has cut supplies and dried up the spot market. LNG imports to the U.S. tumbled 27% in August versus a year earlier, according to the Department of Energy. "We're on our own," says Craig Pirrong, a University of Houston energy expert.

In the next few years, change is coming. At utilities, long-term contracts will likely return to favor and hedging will be taken seriously. Regulators are considering changes to rate structures to encourage utilities' support for conservation. Currently, the more gas utilities sell, the more money they usually make because of a fee tacked onto each unit of gas sold. A different approach would have the utilities charge a fixed monthly fee covering their costs plus a profit margin, regardless of how much gas consumers use.

On the supply side, there likely will be more LNG terminals, perhaps outside the hurricane-prone Gulf region. Some are talking about increasing the supply of stored natural gas to act as a brake on volatility, much as the Strategic Petroleum Reserve does for oil.